AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph no. [0006] with the following amended paragraph:

[0006]

In order to solve the above problem, the invention ~~described in claim 1~~ provides a moving magnet type linear actuator including: a stator having a stator base and an armature including a magnetic iron core fixed on the stator base and an armature winding wound around the magnetic iron core; and a movable body having a field permanent magnet arranged oppositely to the magnetic iron core through a magnetic gap and a magnetic holder supporting the field permanent magnet and movably arranged on the stator base, wherein the magnetic holder is made of a non-magnetic substance, a magnetic back yoke is arranged on the side opposite to the armature with respect to the field permanent magnet, a width thereof being approximately equal to a width of the field permanent magnet, a length thereof being not smaller than the stroke of the movable body, and both ends thereof in the longitudinal direction being fixed to the stator, and a gap is formed between the magnetic back yoke and the field permanent magnet.

~~The invention described in claim 2~~ In a specific enhancement ~~provides the moving magnet type linear actuator according to claim 1, wherein~~ a scale segment of a linear scale is fixed to the magnetic holder, and a detecting segment of the linear scale is fixed to the stator base with a gap from the scale segment.

~~The invention described in claim 3 provides the moving magnet type linear actuator according to claim 1 or 2, wherein~~In a more specific enhancement two linear guides are arranged in parallel so as to sandwich both sides of the armature, guide blocks are arranged on each of the linear guides, and the magnetic holder is fixed on the guide blocks.

~~The invention described in claim 4 provides the moving magnet type linear actuator according to any one of claims 1 to 3, wherein~~In another enhancement, a slot having a width corresponding to the widthwise space between the guide blocks is machined in the non-magnetic holder, and the field magnet is fixed in the slot.

~~The invention described in claim 5 provides the moving magnet type linear actuator according to any one of claims 1 to 4, wherein~~In another specific enhancement a stopper mechanism is provided at each of four ends of the two linear guides in parallel.

~~The invention described in claim 6 provides the moving magnet type linear actuator according to any one of claims 1 to 5, wherein~~In yet another enhancement guide pipes for forcible cooling refrigerant are embedded in the stator base.

~~The invention described in claim 7 provides the moving magnet type linear actuator according to any one of claims 1 to 6, wherein~~In another specific enhancement, the magnetic back yoke is a laminate of thin electromagnetic steel plates.

Please replace the paragraph no. [0007] with the following amended paragraph:

Advantage of the Invention

[0007]

In accordance with the invention of a moving magnet type linear actuator ~~described in claim 1~~, the magnetic holder is made of a non-magnetic substance, and a magnetic back yoke is fixed to the stator. For this reason, the weight of the movable body can be reduced, thereby realizing the maximum acceleration/deceleration.

~~In accordance with the invention described in claim 2, in the moving magnet type linear actuator according to claim 1~~In a specific enhancement, a scale segment of a linear scale is fixed to the magnetic holder, and a detecting segment of the linear scale is fixed to the stator base with

a gap from the scale segment. In this configuration, since the magnetic holder is made of the non-magnetic substance, a position detecting portion is difficult to be susceptible to the influence of magnetic lines of force.

~~In accordance with the invention described in claim 3, in a moving magnet type linear actuator according to claim 1 or 2~~In another specific enhancement, two linear guides are arranged in parallel so as to sandwich both sides of the armature, guide blocks are arranged on each of the linear guides, and the magnetic holder is fixed on the guide blocks. For this reason, the linear guide rails and guide blocks can be made of the material with lower strength.

Please replace the paragraph no. [0008] with the following amended paragraph:

[0008]

~~In accordance with the invention described in claim 4, in a moving magnet type linear actuator according to any one of claims 1 to 3~~In yet another specific enhancement, a slot having a width corresponding to the widthwise space between the guide blocks is machined in the non-magnetic holder, and the field magnet is fixed in the slot. For this reason, the height of the linear actuator can be lowered.

~~In accordance with the invention described in claim 5,~~

~~in a moving magnet type linear actuator according to any one of claim 1 to 4~~In still another specific enhancement, a stopper mechanism is provided at each of four ends of the two linear guides in parallel. For this reason, the capability of the stopper mechanism may be relatively low. In addition, the stopper mechanisms are provided at not two points in the prior art but at four points, the capability of a single stopper mechanism may be further low.

~~In accordance with the invention described in claim 6,~~

~~in a moving magnet type linear actuator according to any one of claims 1 to 5~~In another specific enhancement, guide pipes for forcible cooling refrigerant are embedded in the stator base. In this configuration,

a forcible cooling structure can be realized in which the heat generating area collected at a single position on the side of the stator is cooled by liquid, thereby permitting the cooling performance to be improved.

~~In accordance with the invention described in claim 7, in a moving magnet type linear actuator according to any one of claims 1 to 6~~In another enhancement, the actuator is~~,~~ characterized in that the magnetic back yoke is a laminate of thin electromagnetic steel plates. For this reason, eddy current loss due to crossing of field magnetic fluxes can be reduced, thereby enhancing the iron loss reducing effect during the high speed.